



Your partner in rail maintenance

The best solutions for your grinding and cutting applications

English

Premium grinding solutions since 1919
www.tyrolit.com

TYROLIT

The Tyrolit Group

Tyrolit is one of the world's leading manufacturers of grinding and dressing tools as well as a system provider for the construction industry.

Since 1919, our innovative tools have made an important contribution to the technological development in many industries. Tyrolit offers tailored grinding solutions for various applications, as well as a comprehensive assortment of standard tools for customers all over the world.

With roots in the heart of the Austrian Alps, Tyrolit combines the strengths of family values with a global vision and over a century of individual corporate and technological experience.



Tyrolit headquarters in Schwaz (Austria)

Facts & figures



80,000+
standard products



30+
global production sites



4,500+
valued employees



140+
countries within our reach



500+
patents worldwide

Sales companies in Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, India, Indonesia, Italy, Netherlands, Norway, Poland, Portugal, Russia, Spain, South Africa, South Korea, Sweden, Switzerland, Thailand, UAE, UK and the US. Sales partners in 65 other countries.

Your competent partner in rail maintenance

The requirements for grinding and cut-off wheels when processing railroad, tram or subway tracks are diverse. Whether for manual work or for use on grinding trains – the customer expects a tool that fulfils the high demands for short grinding times and a long lifetime even under the most difficult application conditions.

Tyrolit offers many years of experience in a wide range of applications and techniques for rail processing. With an extensive portfolio of products and exceptional product quality, processes can be optimised, productivity is increased and maximum safety for the operator guaranteed.

This brochure provides you with an overview of our product range for rail processing. Our experienced application engineers will be happy to help you optimise products for your individual requirements.



Application technology

The best grinding solutions for your processes

Expertise in cutting and grinding – this has been Tyrolit's hallmark for more than a hundred years.

Thanks to the enormous process expertise of our application engineers, we can offer our customers sustainable solutions that meet their high technical and economic expectations.

The global team of specialised application engineers defines solutions individually tailored to your needs. Our assortment has been optimised for the respective machines and grinding processes over many years of cooperation with end users and machine manufacturers.

Advantages for you

- + Worldwide presence of our application engineers
- + Process optimisation and tool solutions for individual tasks
- + Cooperation with established machine manufacturers
- + Internal and external training courses



Customised solutions Tailored to your application and requirements

In the field of rail maintenance, customers have the highest demands on the performance and quality of the tools supplied for all grinding and cutting applications.

To guarantee the best possible solution for your application, Tyrolit offers customised products for a wide range of applications. Below you will find an overview of the available grinding tools for rail processing. A detailed description of these tools and their respective areas of application can be found on the following pages.

Grinding tools for rail maintenance

| Component | Grinding application | Recommended product |
|-----------|-----------------------------|-----------------------------|
| Rail | Cutting | PREMIUM CERABOND X STANDARD |
| | Grinding train | SECUR Rail |
| | Hand-operated grinding | SECUR Rail |
| | Off-hand cutting & grinding | PREMIUM CERABOND X |





Cut-off wheels

for rail cutting

The newly developed CERABOND X cut-off wheel for rails has been designed for maximum aggressiveness and durability. As a result, this tool defies the most adverse conditions and gets you to your goal faster! The portfolio also includes cut-off wheels in various quality lines to cover all requirements.

These special rail cutting wheels may only be used for hand-guided cutting with the appropriate clamping device attached to the rail. Never use them purely for off-hand cutting!



TOP
PERFORMER


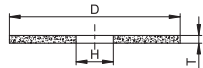
★★★
PREMIUM

CERABOND X cut-off wheels



Advantages

- + Shortest cutting times and comfortable working with little effort
- + Very long service life and stability
- + Clean and flush cutting areas reduce rework and working times
- + Best results even in damp and cold environments as well as with fluctuating temperatures

| | Shape | Type number | Dimensions [D x T x H] | Specification | Vs [m/s] | PU | |
|---|---|-------------|------------------------|------------------|----------------|-----|----|
|  |  | 41 | 34617164 | 300 x 3,5 x 20 | CA24R-BFP RAIL | 100 | 10 |
| | | | 34617165 | 350 x 3,8 x 20 | CA24R-BFP RAIL | 100 | 10 |
| | | | 34617166 | 400 x 4,3 x 20 | CA24R-BFP RAIL | 100 | 10 |
| | | | 34617167 | 300 x 3,5 x 25,4 | CA24R-BFP RAIL | 100 | 10 |
| | | | 34617168 | 350 x 3,8 x 25,4 | CA24R-BFP RAIL | 100 | 10 |
| | | | 34617169 | 400 x 4,3 x 25,4 | CA24R-BFP RAIL | 100 | 10 |


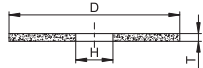
★★★
PREMIUM

Cut-off wheels with universal bore



Advantages

- + Integrated reduction bush enables use on machines with 20 mm or 25.4 mm mounting
- + Improved specification for increased lifetime and better cutting performance
- + Clean and bright cutting areas facilitate subsequent work steps
- + Very comfortable working possible without great effort

| | Shape | Type number | Dimensions [D x T x H] | Specification | Vs [m/s] | PU | |
|---|---|-------------|------------------------|-----------------|--------------|-----|----|
|  |  | 41 | 34517333 | 300x3,5x20/25,4 | A24R-BFPRAIL | 100 | 10 |
| | | | 34517332 | 350x3,8x20/25,4 | A24R-BFPRAIL | 100 | 10 |
| | | | 34517334 | 400x4,3x20/25,4 | A24R-BFPRAIL | 100 | 10 |


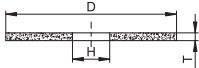


Cut-off wheels

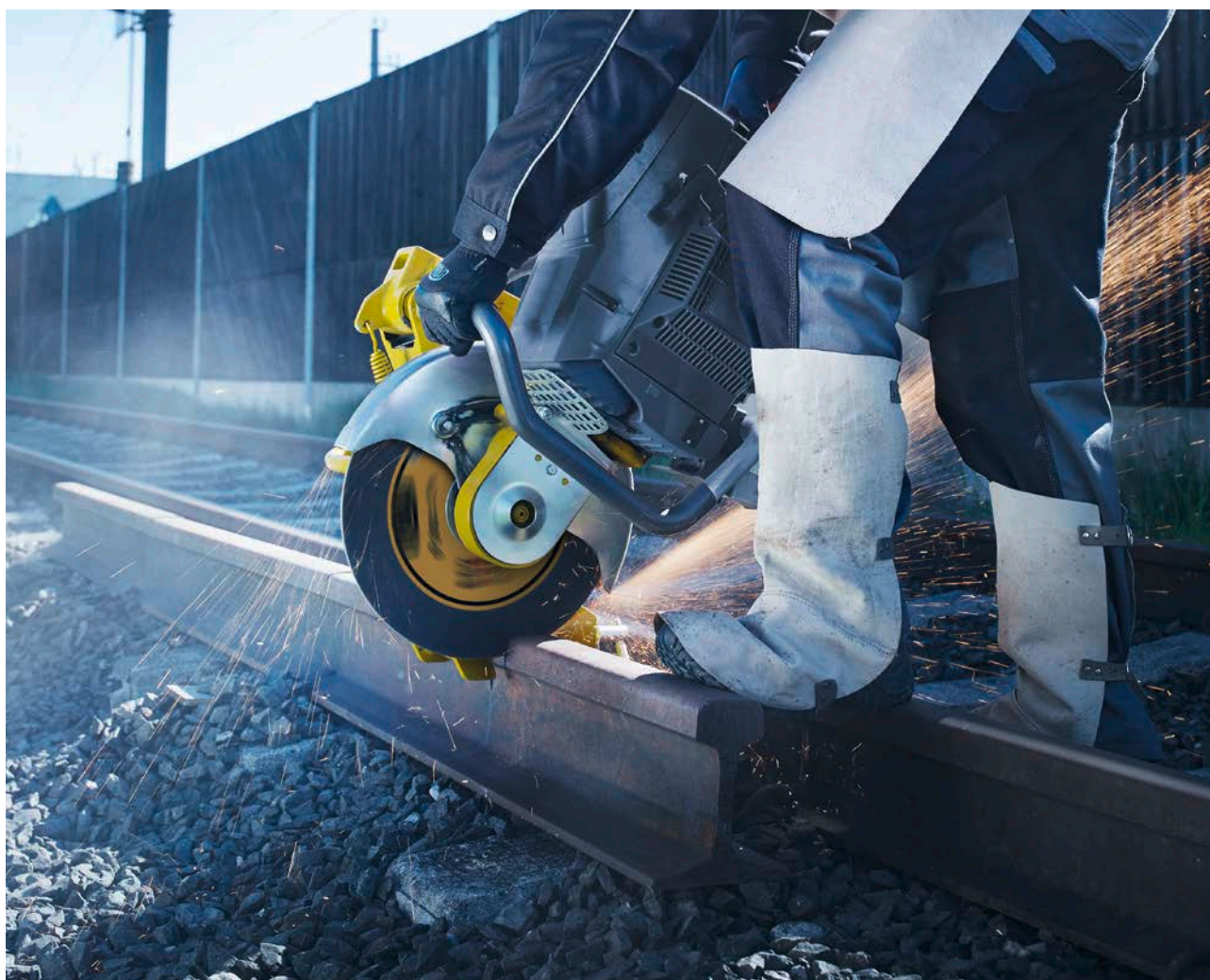


Advantages

- + Comfortable cutting with good cutting ability

| Shape | Type number | Dimensions [D x T x H] | Specification | Vs [m/s] | PU | |
|---|-------------|------------------------|----------------|--------------|----|----|
|   | 41 | 75937 | 300 x 3,5 x 20 | A30S-BFSRAIL | 80 | 10 |
| | 75938 | 300 x 3,5 x 22,23 | A30S-BFSRAIL | 80 | 10 | |
| | 75934 | 350 x 4,0 x 20 | A30S-BFSRAIL | 100 | 10 | |
| | 75935 | 350 x 4,0 x 22,23 | A30S-BFSRAIL | 100 | 10 | |
| | 75936 | 350 x 4,0 x 25,4 | A30S-BFSRAIL | 100 | 10 | |
| | 355251 | 400 x 4,3 x 25,4 | A30S-BFSRAIL | 100 | 10 | |

Further dimensions and designs on request

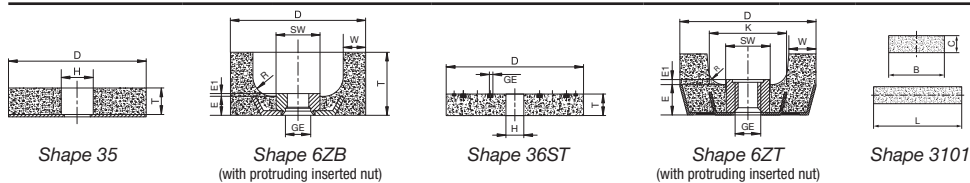



Grinding tools

for grinding trains

The grinding of longer sections of track, both preventive and corrective, is carried out by trains mounted with up to 96 grinding spindles. Tyrolit grinding products are customised to your requirements. Our high-quality grinding tools achieve an increased surface quality of the rail running surface, which helps to reduce noise emissions and extend the lifetime of the rail.

SECUR RAIL grinding wheels



| Shape | Type number | Dimension [D x T x H] | Specification | Vs [m/s] | Fibre glass reinforcement | Back. plate | Comment |
|---|-------------|-----------------------|--------------------|----------|---------------------------|-------------|------------------|
|  | 35 | 34339642 | 180 x 105 x 90 | A16-BC | 45 | X | Speno |
| | | 34364531 | 260 x 35 x 195 | A20-BB | 50 | | X Speno |
| | | 34357184 | 260 x 83,5 x 152,4 | A14-BA | 50 | X | X Harsco |
| | | 34338453 | 260 x 91 x 153 | A14-BA | 50 | X | X Loram |
| 6ZB | 34427925 | 100 x 110 x M20 | A20-BA | 50 | | | Autech |
| 6ZT | 34466304 | 102 x 110 x M20 | A16-BB | 50 | | | Autech |
| | 34427926 | 130 x 110 x M20 | A14-BA | 50 | | | Autech |
| | 34646910 | 152 x 75 x 5/8" | A20-BA | 50 | X | | Harsco |
| 36ST | 34375832 | 250 x 75 x 130 | A16-BB | 50 | | | SRT Fano |
| 3101 | 34715444 | 75 x 150 x 248 | A20-BA | | | | Plasser & Theuer |

Further dimensions and designs on request



Design with fibre glass reinforcement



Design with protruding inserted nut



Design with backup plate

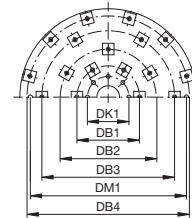
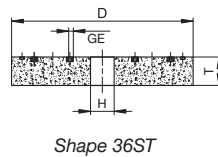
Grinding tools

for hand-operated grinding machines

Hand-operated grinding tools are used on short sections of rails to remove surface defects, but are mainly used for laying new individual rail sections. Grinding the weld seam produces rail head profiles with high dimensional and shape accuracy. Our easy-cutting grinding products guarantee short machining times with maximum safety.



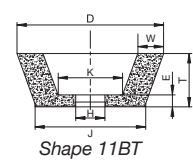
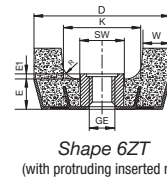
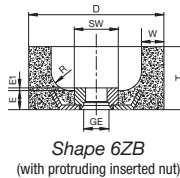
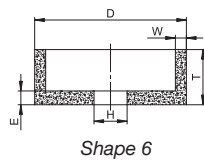
SECUR RAIL grinding wheels with thread inserts



| Shape | Type number | Dimension [D x T x H] | Specification | Vs [m/s] | Comment |
|-------|-------------|------------------------|---------------|----------|--------------|
| 36ST | 444889 | 125 x 60 x 55 – 4 x M8 | A14-BQ | 50 | Robel 13.44 |
| 36ST | 444890 | 150 x 60 x 80 – 4 x M8 | A14-BQ | 50 | Robel 13.48 |
| 36ST | 34440882 | 150 x 72 x 80 – 6 x M8 | A14-BR | 50 | Geismar MP12 |

Further dimensions and designs on request

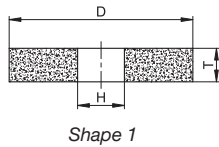
SECUR RAIL cup wheels



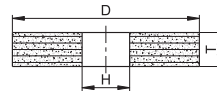
| Shape | Type number | Dimension [D x T x H] | Specification | Vs [m/s] | Comment |
|-------|-------------|-----------------------|---------------|----------|---------------------|
| 6 | 34460690 | 100 x 110 x 22,23 | A20-BB | 50 | Möser RO-V135 |
| 6ZB | 34675106 | 127 x 51 x M20 | A16-BQ | 50 | Geismar MP6 /MP12 |
| | 34577971 | 150 x 65 x M20 | A14-BA | 50 | Robel 13.44 / 13.48 |
| | 34239129 | 150 x 65 x 5/8" | A16-BP | 50 | Geismar MV3 |
| 6ZT | 34374373 | 150 x 67 x M20 | A14-BP | 50 | Geismar MP23 |
| 11BT | 34440881 | 110 x 55 x 22,23 | A16-BP | 50 | Angle Grinder |

Further dimensions and designs on request

SECUR RAIL grinding wheels



Straight grinding wheel without fibre reinforcement



Straight grinding wheel with fibre reinforcement

Shape 1F63/1F80

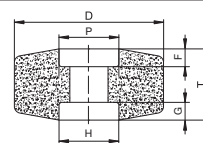
| | Shape | Type number | Dimension [D x T x H] | Specification | Vs [m/s] | Comment |
|--|-------|-------------|-----------------------|---------------|----------|-------------|
| | 1 | 34374374 | 125 x 18 x 16 | A16-BA | 50 | |
| | | 34374421 | 200 x 20 x 22,23 | A16-BA | 50 | |
| | | 34374426 | 225 x 20 x 22,23 | A16-BA | 50 | |
| | | 34369132 | 254 x 40 x 76,2 | A16-BA | 50 | Robel 13.61 |
| | | 34369133 | 255 x 32 x 25,4 | A16-BA | 50 | Robel 13.61 |
| | | 158752 | 260 x 25 x 120 | A16-BA | 50 | Robel 13.61 |
| | 1F80 | 34374596 | 175 x 25 x 20 | A16-BFA | 80 | |
| | | 34374600 | 250 x 20 x 25,4 | A16-BFA | 80 | |
| | | 34374598 | 230 x 15 x 22,23 | A16-BFA | 80 | |
| | | 34374599 | 230 x 23 x 22,23 | A16-BFA | 80 | |

Further dimensions and designs on request

SECUR RAIL grinding discs

for rail webs

These products are used under the head of the rail to remove rust and scale and to smooth welding seams. Our easy cutting grinding tools guarantee short machining times with maximum safety.



Shape 9

| | Shape | Type number | Dimension [D x T x H] | Specification | Vs [m/s] | Comment |
|--|-------|-------------|---------------------------|---------------|----------|-------------|
| | 9 | 222265 | 135 x 90 x 25,4 - 52 x 30 | A14-BR | 50 | Robel 13.03 |
| | | 34366369 | 136 x 96 x 25,4 - 52 x 30 | A14-BR | 50 | Geismar MS9 |

Further dimensions and designs on request

Cutting and grinding tools





for off-hand grinding machines

Cut-off and grinding wheels are used for various repair and cleaning work, e.g. in the area of the rail head, fishplates and bolt connections. Tyrolit tools meet the most advanced requirements for cost-effective working, high stock removal rates, simple handling and above-average lifetime.

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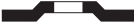
CERABOND X cut-off and grinding wheels

| | Shape | Type number | Dimension [D x T x H] | Specification | PU |
|---|---|-------------|-----------------------|---------------|---------|
|  |  | 41 34638765 | 230 x 2,0 x 22,23 | CA30Q-BFP | 15 Stk. |
|  |  | 27 34401850 | 178 x 7,0 x 22,23 | CA24Q-BFP | 5 Stk. |
| | | 34387127 | 230 x 7,0 x 22,23 | CA24Q-BFP | 5 Stk. |
| | | 34401849 | 178 x 4,0 x 22,23 | CA24Q-BFP | 5 Stk. |
| | | 34401852 | 230 x 4,0 x 22,23 | CA24Q-BFP | 5 Stk. |
| | | 34645085 | 178 x 7,0 x 22,23 | CA24P-BFP | 5 Stk. |
| | | 34611111 | 230 x 7,0 x 22,23 | CA24P-BFP | 5 Stk. |

Further dimensions on request or see industrial trade catalogue

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Cut-off and grinding wheels

| | Shape | Type number | Dimension [D x T x H] | Specification | PU |
|---|---|-------------|-----------------------|---------------|---------|
|  |  | 41 872344 | 230 x 3,0 x 22,23 | A30Q-BFXA | 25 Stk. |
|  |  | 27 34046136 | 230 x 8,0 x 22,23 | A24Q-BFX | 10 Stk. |

Further dimensions and designs on request

| Data collection for rail maintenance | | | |
|--|--|--|---|
| Customer | Name: | | Customer no.: |
| | Address: | | Current supplier: |
| | Contact: | | Qty./year: |
| | E-mail/tel.: | | Price: |
| Machine | Machine type: | <input type="checkbox"/> Grinding train <input type="checkbox"/> Hand-op. grinding <input type="checkbox"/> Off-hand grinding <input type="checkbox"/> Cutting <input type="checkbox"/> Off-hand cutting | |
| | Manufacturer: | | Max. operating speed: <input type="checkbox"/> m/s <input type="checkbox"/> rpm |
| | Motor power: | <input type="checkbox"/> kW <input type="checkbox"/> HP | Vs adjustable: <input type="checkbox"/> yes <input type="checkbox"/> no |
| | Pressure: | (e.g. bar) | No. of grinding spindles: |
| | Train speed: | <input type="checkbox"/> km/h <input type="checkbox"/> mph | |
| Grinding/cut-off wheel | Shape of grinding and cut-off wheels | | |
| | Dimensions (mm): | (Please see figure in attachment) | |
| | *Fibre glass reinforcement: | <input type="checkbox"/> yes <input type="checkbox"/> no | |
| | ** Machine mount: (shape 36ST only) | Pitch circles: | Thread: <input type="checkbox"/> left <input type="checkbox"/> right |
| | No. of inserted nuts/division: | | Design of protruding inserted nut: <input type="checkbox"/> yes <input type="checkbox"/> no |
| Workpiece | Field of work: | (e.g. passenger/freight transport, underground train, tram, high-speed track) | |
| | Designation: | | Material: |
| | Ground surface (µm): | <input type="checkbox"/> Ra <input type="checkbox"/> Rt <input type="checkbox"/> Rz | Material hardness: |
| | Grinding position: | <input type="checkbox"/> Rail head <input type="checkbox"/> Rail side/flank <input type="checkbox"/> Rail web <input type="checkbox"/> Weld seam | |
| Customer requirements | Required surface (µm): | <input type="checkbox"/> Ra <input type="checkbox"/> Rt <input type="checkbox"/> Rz | Aim of new recommendation: |
| | Long lifetime: | | |
| | Stock removal/passing over: | | |
| Information | Please attach drawing/photo or sketch: | | |
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